

Perspectives of the role of a Software DER

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Definition of perspective

- **perspective – 2 a : *the interrelation in which a subject or its parts are mentally viewed* b: *the capacity to view things in their true relations or relative importance.***

Perspectives of the role of a Software DER

- **Let's start by saying there are company DERs and consultant DERs.**
 - **Are the perspectives of all company DERs alike?**
 - **Are the perspectives of all consultant DERs alike?**

First let's look at the more simple case of the company DER

What perspectives can affect the role of the company software DER:

- Is the DER the supervisor of the group which performs the work?**
- Is the DER in the group which is preparing the DO-178B artifacts?**
- Is the DER not the supervisor, nor a member of the group producing the DO-178B artifacts but resides at the site where the work is being performed?**
- Has the DER ever produced DO-178B artifacts of the nature being reviewed or approved?**
- Is the DER resident at the site where the DO-178B artifacts are being produced?**
- How familiar is the DER with the personnel producing the DO-178B artifacts?**

Perspectives of the role of a Software DER

- Next let's look at the more complex case of the consultant software DER. What perspectives can affect the role of the consultant software DER:
- These perspective are so complex in my mind that I have to consider this to be a two dimensional problem. I will address these two dimensions, one at a time. The first dimensions I want to address is "Who has employed the consultant software DER?":

Who has employed the consultant software DER?

- Did the FAA, themselves, hire the consultant to act in their behalf (more of this is happening now than in the past with the “FAA down-sizing.”)?
- Did an air framer hire the consultant to help them with a TC or STC or to check the TSO data of a supplier?
- Did a TSO applicant hire the consultant?
- Did a Reuse Component supplier hire the consultant to help provide the appropriate artifacts to a TSO applicant or a TC, STC or PMA applicant?

What perspectives does the consultant DER have?

The other dimension is much like the company DER's perspective, with a slightly different slant:

- Did the consultant DER also supervise the work associated with the DO-178B artifacts?
- Did the consultant DER also help in preparing the DO-178B artifacts?
- Was the consultant DER not involved in the supervision or development of the DO-178B artifacts?
- Has the consultant DER ever produced DO-178B artifacts of the nature being reviewed or approved?
- How familiar is the consultant DER with the personnel producing the DO-178B artifacts?

More detail for the perspective of a company DER

- Is the DER the supervisor of the group which performs the work?
- Is the DER in the group which is preparing the DO-178B artifacts?
- Is the DER not the supervisor, nor a member of the group producing the DO-178B artifacts but resides at the site where the work is being performed?
- Has the DER ever produced DO-178B artifacts of the nature being reviewed or approved?
- Is the DER resident at the site where the DO-178B artifacts are being produced?
- How familiar is the DER with the personnel producing the DO-178B artifacts?

More detail perspectives for a consultant DER

Who hired the consultant DER?

- Did the FAA, themselves, hire the consultant to act in their behalf (more of this is happening now than in the past with the “FAA down-sizing.”)?
- Did an air framer hire the consultant to help them with a TC or STC or to check the TSO data of a supplier?
- Did a TSO applicant hire the consultant?
- Did a Reuse Component supplier hire the consultant to help provide the appropriate artifacts to a TSO applicant or a TC, STC or PMA applicant?

What perspective does the consultant DER have?

- Did the consultant DER also supervise the work associated with the DO-178B artifacts?
- Did the consultant DER also help in preparing the DO-178B artifacts?
- Was the consultant DER not involved in the supervision or development of the DO-178B artifacts?
- Has the consultant DER ever produced DO-178B artifacts of the nature being reviewed or approved?
- How familiar is the consultant DER with the personnel producing the DO-178B artifacts?

Evaluate your own perspectives!

It is the responsibility of each Software DER to create the environment and situation which permits him/her to best perform their job. Some things you may consider are:

- As DERs it is important that we present to the FAA, to the best of our ability, clear, concise and succinct plans which meet the spirit of DO-178B.**
- As DERs it is important that we develop the ability to switch hats as the circumstances require permitting us to find and establish compliance DO-178B.**
- Your Software DER task does not always permit perfect independence but it needs to permit sufficient independence.**
- Each of us needs to be attentive, so that we do not put ourselves in circumstances which could permit us to compromise our ethics.**

Seven Roles of Software DER from the Job-Aid supplement

What are the expected results when we combine these roles* with the perspectives just discussed?

- **Policeman – holds developer accountable**
- **Teacher/Coach/Interpreter**
- **Auditor/Reviewer**
- **Systems and Safety Engineer**
- **Quality Engineer**
- **Referee**
- **Jack of All Trades**

*** (These roles have been published in Supplement 2 to the Job Aid dated 16 Jan 2004)**

What would a reasonable person do in the circumstances placed upon them when asked to perform within these roles from their appropriate perspective?

In the end, always be prepared for your family to fly, with your confidence, in the equipment you help certify.